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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,293	07/08/2003	Jong-Weon Moon	8733.903.00-US	7386

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EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT PAPER NUMBER

2871

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/614,293

Applicant(s)

MOON, JONG-WEON

Examiner

Prasad R Akkapeddi

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-11 in the reply filed on 12/15/2004 is acknowledged.
2. Claims 12-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/15/2004.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-7 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoon (U.S. Patent Application Publication US 2004/0008301).

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

- a. As to claim 1: Yoon discloses a liquid crystal display (Fig. 3) comprising a first and second substrates (100 and 200) spaced apart from each other,
- a retardation layer (102) on an outer surface of the first substrate (100),
 - a linear polarizing layer (104) on the retardation layer (102),
 - a cholesteric liquid crystal color filter (CCF) layer (202) on an inner surface of the second substrate (200),
 - a liquid crystal layer (204) between the first substrate (100) and the CCF layer (202),
 - a first cholesteric liquid crystal (CLC) polarizing layer (206b) on an outer surface of the second substrate and having a first helical pitch of a first circular polarization direction,
 - a second cholesteric liquid crystal (CLC) polarizing layer (206a) on the first CLC polarizing layer (206b), the second CLC polarizing layer having a second helical pitch of a second circular polarization direction opposite to the first circular polarization direction; (Note: the helical pitch and the circular polarization directions of the CLC polarizing layers is disclosed in [paragraph 0041]); and
 - a backlight unit (300) outside the second CLC polarizing layer (206a).
- b. As to claims 2 and 3: In [paragraph 0042], Yoon discloses that the first helical pitch may be about 780nm (because of single wavelength, it is discrete) and the second helical pitch may be about 480nm to 580nm (hence continuous).

Yoon also teaches that the first helical pitch can be between 380nm to 780nm including 580nm. Hence the pitch is adjacent to red, green and blue colors and the second helical pitch corresponds to between 480nm to 580nm, hence broad band, as recited in the instant claims.

- c. As to claims 4 and 5: In [paragraph 0038], Yoon teaches the third helical pitch of a left handed circularly polarized light for the CCF layer (202) corresponding to bands of wavelengths of red, green and blue colors. In [paragraph 0040], Yoon teaches a left handed circularly polarized light for the CLC polarizing layer. Hence the third pitch of the CCF layer is the same as the first circular polarization direction.
- d. As to claim 6: The right-handedness and the left handedness of the first to third circular polarization directions is disclosed by Yoon in paragraphs [0038 and 0040]
- e. As to claim 7: in [paragraph 0042], Yoon discloses the continuous and discrete nature of the first and second helical pitches.
- f. As to claim 10: In [paragraph 0044 and elsewhere] Yoon discloses the backlight unit (300) emits light of broad band 380nm to 780nm having red, green and blue peak wavelengths.
- g. As to claim 11: Yoon teaches that the retardation layer (102) is a quarter wave plate [paragraph 0035].

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon in view of Sahouani et al. (Sahouani) (U.S. Patent No. 6,574,044).

As to claims 8 and 9: Yoon does not disclose a diffusing layer or a compensation layer of viewing angle.

Sahouani in disclosing dichroic polarizers for use in electronic display devices and liquid crystal displays (col. 2, lines 31-42) teaches the construction of the front polarizer (300) of the device as having a diffuser on either side of the polarizer or a compensator (col. 11, lines 10-17).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the polarizer with the diffuser and a compensator as disclosed by Sahouani to the device of Yoon to filter out a portion of ambient light without significantly reducing the intensity of light projected onto the screen, thereby enhancing contrast (col. 10, lines 17-21).

Art Unit: 2871


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 571-272-2285. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRR

Prasad R Akkapeddi, Ph.D
Examiner
Art Unit 2871


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